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CLAIMS

1. A method for the production of a fluorinated phenylenediamine represented by the following formula (2), which comprises steps of reacting a diamide represented by the following formula (1) with NaOX [wherein X stands for a bromine atom (Br) or a chlorine atom (Cl)] at a molar ratio of the NaOX to the diamide (NaOX/diamide ratio) in the range of 2.0 - 6.0 and NaOH at a molar ratio of the NaOH to the diamide (NaOH/diamide ratio) in the range of 1.8 - 6.0.

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$$F_{l} \qquad Y_{m} \qquad (1)$$

$$(CONH_{2})_{2}$$

$$F_{l} \qquad Y_{m} \qquad (2)$$

$$(NH_{2})_{2}$$

wherein in the formulas (1) and (2), Y stands for a hydrogen atom (H), a bromine atom (Br), a chlorine atom (Cl), a fluorine atom (F), a $C_1 - C_5$ alkyl group optionally having a substituent, or a $C_1 - C_5$ alkoxyl group optionally having a substituent, l is an integer in the range of 1 - 4, m is an integer in the range of 0 - 3, provided that the total number of 1 and m (1 + m) is 4.

- 2. A method according to claim 1, wherein said diamide is reacted with NaOX and NaOH at a temperature in the range of 0 20°C and the resultant reaction product is heated at a temperature exceeding 20°C and not exceeding 100°C.
- 3. A method according to claim 1 or 2, wherein said diamide 25 is a diamide represented by the following formula (4) and said phenylenediamine is a phenylenediamine represented by

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the following formula (5).

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$$H_2NOC$$
 F_3
 $CONH_2$
 (4)

$$H_2N$$
 F_3
 NH_2
 (5)

wherein in the formulas (4) and (5), Y stands for a hydrogen atom (H), a bromine atom (Br), a chlorine atom (Cl), a fluorine atom (F), a $C_1 - C_5$ alkyl group optionally having a substituent, or a $C_1 - C_5$ alkoxyl group optionally having a substituent.

- 4. A method according to any one of claims 1 3, wherein the molar absorption coefficient of the fluorinated phenylenediamine represented by the formula (2) at a wavelength of 450 nm is not more than 2.5 (1/mol·cm).
- 5. A method for the production of a polyamic acid represented by the formula (9), which comprises reacting the fluorinated phenylenediamine produced by the method set forth in claim 1 or 2 with tetracaraboxylic acid represented by the formula (8), the acid anhydride or acid chloride thereof, or the ester thereof in an organic solvent.

wherein X' stands for a tetravalent organic group,

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$$\begin{array}{c|c}
F_1 & Y_m \\
\hline
 & NHOC & CONH \\
\hline
 & HOOC & COOH
\end{array}$$

wherein Y stands for a hydrogen atom (H), a bromine atom (Br), a chlorine atom (Cl), a fluorine atom (F), a C_1 - C_5 alkyl group optionally having a substituent, or a C_1 - C_5 alkoxyl group optionally having a substituent, l is an integer in the range of 1 - 4, m is an integer in the range of 0 - 3, provided that the total number of l and m (l + m) is 4, and X' stands for a tetravalent organic group.

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6. A method for the production of polyimide represented by the formula (10), which comprises cyclizing by heating the polyamic acid produced by the method set forth in claim 5:

$$\begin{array}{c|c}
F_1 & O & O \\
\hline
& V_m & C & C \\
\hline
& V & V \\$$

wherein Y stands for a hydrogen atom (H), a bromine atom (Br), a chlorine atom (Cl), a fluorine atom (F), a C₁ - C₅ alkyl group optionally having a substituent, or a C₁ - C₅ alkoxyl group optionally having a substituent, l is an integer in the range of 1 - 4, m is an integer in the range of 0 - 3, provided that the total number of l and m (l + m) is 4, and X' stands for a tetravalent organic group.